25X1

NPIC/TDS/D-1020-67
18 September 1967

Declass Review by NGA.

MEMORANDUM FOR THE RECORD

SUBJECT: Anticipated Overrun of Project #10197, Viewgraph Maker
X1

1. Historical Background.

A Project Suggestion Form (PSF #118) for a viewgraph maker was
X1 submitted on 26 May 1966 by [redacted] of the Publications Division. [redacted] 25X1
X1 [redacted] a former member of the Technical Development Staff, evaluated
X1 the PSF and felt that a modified [redacted] Platemaster using the [redacted] process 25X1
(Reference NPIC/P&DS/D/6-1583, 16 September 1966) would meet the project requirements. The Imagery Analysis Service expressed interest in this system on 3 October 1966 (Reference IAD/OSS-220/66). On 2 November 1966
X1 [redacted] submitted a technical proposal (171/66) for a Viewgraph Maker. The
Publications Division indicated approval of the proposed [redacted] material and 25X1
X1 [redacted] equipment in NPIC/PD 2-67. The Imagery Analysis Service likewise concurred via IAD/OSS-256/66.

2. Contractual Matters

X1 On 4 November 1966 [redacted] quoted a straight fixed price of [redacted] 25X1
for two Viewgraph Makers. On 31 March 1967 they raised their quote to
X1 a fixed price of [redacted] This increase was due to [redacted] increased Over- 25X1
head and G&A rates incurred during the period required for the approval
X1 process. [redacted] Contracting Officer, NPIC, on 31 March 1967 (memo attached) mentioned a cost-type contract with the opinion that it could be less expensive. While there was a difference of opinion within our staff on which type of contract should be pursued, it was decided to use the cost plus incentive fee contract. The target cost was [redacted] 25X1
X1 and the target fee was [redacted] for a total cost of [redacted] The contract 25X1
date was 13 April 1967 and the period of performance was to be from 13 April 1967 to 14 August 1967.

3. Contract Monitoring

X1 [redacted] and I made trips to [redacted] on 21 April and 12 May 1967. 25X1
During these visits we discussed the design of the Viewgraph Maker. The contractor encountered no apparent serious technical problems in his design.
X1 During May 1967 [redacted] left the Technical Development Staff and I assumed responsibilities as project monitor of this contract. The contractor's monthly reports for April, May, and June 1967 all estimated that the project cost would exactly equal the target cost of the contract.

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X1 [redacted]

On 11 August 1967 I visited [redacted] to discuss an anticipated 25X1
overrun on another contract. I specifically questioned [redacted] 25X1
as to the status of funds for the Viewgraph Maker contract. He assured me
X1 at that time that [redacted] did not anticipate an overrun on contract [redacted] 25X1
During the following week I called [redacted] project engineer 25X1
for this contract, and again requested information concerning the status of the funds. He did not foresee any financial difficulties and in fact, thought that he could possibly produce the two Viewgraph Makers for less than the target costs.

During the week of 21 August, [redacted] called and requested a 25X1
visit with me on 24 August but gave no indication of the purpose of the visit. He arrived at NPIC on 24 August and informed me that he anticipated
an overrun of approximately [redacted] He said that the overrun 25X1
was in part due to increased overhead and G&A rates. When I asked him what the possibilities were for reducing this overrun he mentioned the alternative of furnishing only one Viewgraph Maker instead of the two originally specified by the contract. I reminded him to check the details of the contract since there was probably a provision requiring him to incur no additional costs. I also suggested that he would be required to furnish data on costs to complete for the contract.

X1 [redacted] were notified
X1 of this overrun. [redacted] was to re-evalute his Staff's requirement for the Viewgraph Maker. He notified me shortly after that his Staff's requirement had diminished and that if sufficient funds could be saved, the procurement of their Viewgraph Maker should be reconsidered. This information
X1 was required from [redacted] as rapidly as possible in order to minimize delays that could cost the government additional funds. Also, the contractor needed more time to furnish two costs to complete; one for supplying both Viewgraph Makers and the other for furnishing only one Viewgraph Maker. Had IAS's reply been to the effect of still requiring their equipment, I could have saved this time.

X1 I called [redacted] on 6 September and 8 September and mentioned that their monthly report was overdue and asked when their cost data would be supplied.
X1 [redacted] informed me that he would furnish me the cost data sometime during the week of September 11.

X1 [redacted] Contract Manager [redacted] 25X1
visited NPIC on September 14, 1967. [redacted] auditor 25X1
from the Ames Building, and I discussed the overrun. A cost analysis presented

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X1 [redacted]

X1 [redacted] at that time is attached. [redacted] also delivered the July 25X1
monthly report. The July monthly report still showed that the estimated costs to complete were within the original target cost of the contract. However, as shown in the cost analysis, made as of 14 August, only two
X1 weeks later, an additional [redacted] are estimated for the completion of the
X1 work. [redacted] has shown that they did not make realistic cost estimates at any time before or during the period of the contract.

4. Alternatives

The following alternatives are presented with preliminary cost data. These figures will be updated as soon as further information is received
X1 [redacted]

a. Cancel the contract-Cost approximately [redacted] If the contract 25X1
is cancelled, no assembled equipment will be received. Unfinished parts, unground lenses and other components will be of little value to NPIC.

b. Require all components to be finished and assemble equipment at
X1 NPIC-Cost approximately [redacted]. (This cost is uncertain
X1 at this time since [redacted] has not been presented with this alternative.)
X1 [redacted] informed me that most of the components are completed but that he has not as yet spent more than the contract target cost. I then suggested that the overrun would be consumed almost entirely in assembly, debugging and final report writing. He did not confirm this suggestion but said that he would furnish more up to date figures on expenditures. If we can obtain all components at near the original contract target cost, then perhaps our Equipment Performance Staff could assemble it.

c. Change scope to require only one Viewgraph Maker to be delivered-
X1 Cost approximately [redacted]. Even if only one Viewgraph Maker is made an overrun will still occur. Credit will be received for some of the parts of the other unit.

d. Require both Viewgraph Makers to be delivered-Cost approximately
X1 [redacted] For an additional [redacted] the second Viewgraph 25X1
Maker can be procurred.

e. Send a letter to responsible [redacted] administrative personnel suggest- 25X1
ing that they absorb a portion of the overrun costs. Since some of the overrun costs were due to poor financial estimates and control by [redacted] personnel 25X1
X1 [redacted] might be willing to pay some of these costs. Of course, if this approach does not produce a favorable reply by [redacted] we would still be faced with 25X1
selecting one of the previous memtioned alternatives.

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X1 [redacted]

25X1 [redacted]

Support Systems Branch, Development Staff, TDS

Attachments:
A--PSF#118
B--NPIC/P&DS/D/6-1583
C--IAD/OSS-220/66
D--NPIC/PD 2-67
E--IAD/OSS-256/66
X1 F--Memo, [redacted] Ch/DS/TDS, 31 March 1967
X1 G-[redacted] Cost Analysis
H-[redacted] Proposals for Automatic Viewgraph Generator, dated 2 Nov 66

Distribution:
Original - Route And File
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115704
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PROJECT

9619

AUTOMATIC

VIEWGRAPH

GENERATOR

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INTRODUCTION

The material contained herein is a reproduction of the briefing aids used by [redacted] during the Sept 26 1967 briefing to the customer on the Viewgraph Generator Project. STAT

The material describes the technical scope and specifications of the contract, the proposed Viewgraph Generator hardware and the subsequent difficulties found to carryout the proposed approach. A revised approach taken by [redacted] is illustrated followed by an outline of the distinct advantages of such an approach. A condensed labor hours summary is given for a quantity of 2 units to illustrate the decrease in machinist, assembler and materials cost while showing an increase in engineering and design time as was necessary to alter the original concept. The summary of costs submitted to the customer prior to the briefing is included. STAT

In addition a trade-off analysis of efficiency and costs in making viewgraphs by conventional processes vs the Viewgraph Generator is illustrated in 3 parts.

Attached to these briefing and illustrations are copies of [redacted] internal project cost tracking curves from project start to stop work (April - August 1967), layout drawings of the units under construction and photographs of the equipment on hand. STAT

VIEWGRAPH GENERATOR

STAT SCOPE: MODIFY 2 [redacted] PLATEMASTERS TO PRODUCE VIEWGRAPHS IN ACCORDANCE

STAT WITH PROPOSAL, [redacted]

ADD: GROUND GLASS VIEWING CAPABILITY

CONTRACT AMMENDED TO READ:

1. 11 X 17" PLATEMASTERS
2. HEIGHT MODIFIED TO PERMIT 74"
3. DELIVERY STAGGERED

STAT SPECIFICATIONS: [redacted] PROPOSAL 3560

INPUT MATERIAL: POSITIVE 70MM TO 32" x 40", NEGATIVE 70MM TO 9-1/2" WIDE X 1000'

OUTPUT PRINT SIZE: 8 x 10

MAGNIFICATIONS: 1X, 2X, 4X, 1/2X, 1/4X

LENSES: 2, TO COVER MAGNIFICATIONS ABOVE

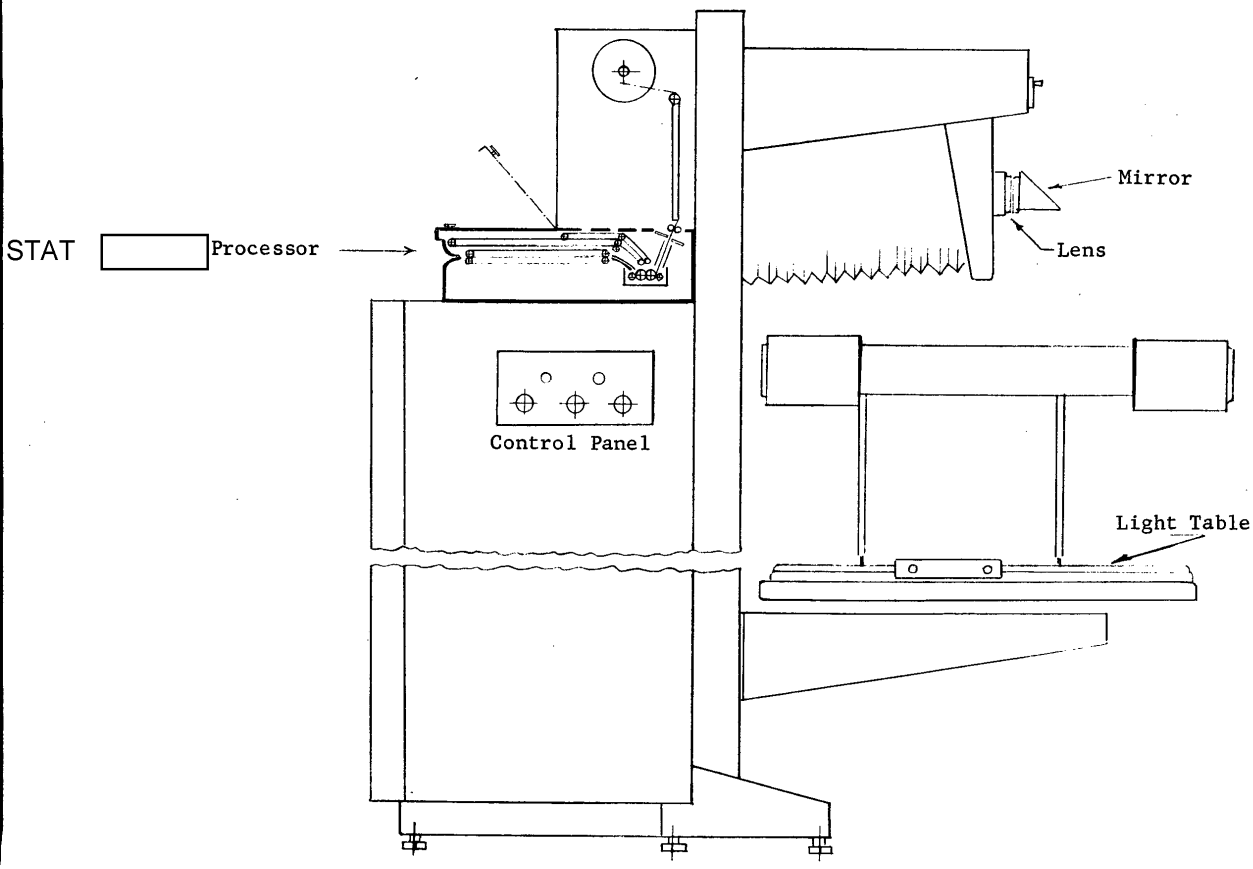
PRINTING TECHNIQUE: DTR POSITIVE TO POSITIVE

EXPOSURE TIME: 1 - 30 SECONDS VARIABLE

INSTALLATION DATA: ROOM LIGHT LOADING AND OPERATION

PROPOSED VIEWGRAPH GENERATOR

(MODIFIED PLATEMASTER CONCEPT)



STAT

PROBLEMS WITH MODIFICATION OF [redacted]
PLATEMASTER

RANGE OF COPY SIZES AND MAGNIFICATIONS COULD NOT BE ACCOMMODATED USING THE STANDARD PLATEMASTER.

ROOM LIGHT LOADING REQUIRED SPECIAL CASSETTE DESIGN.

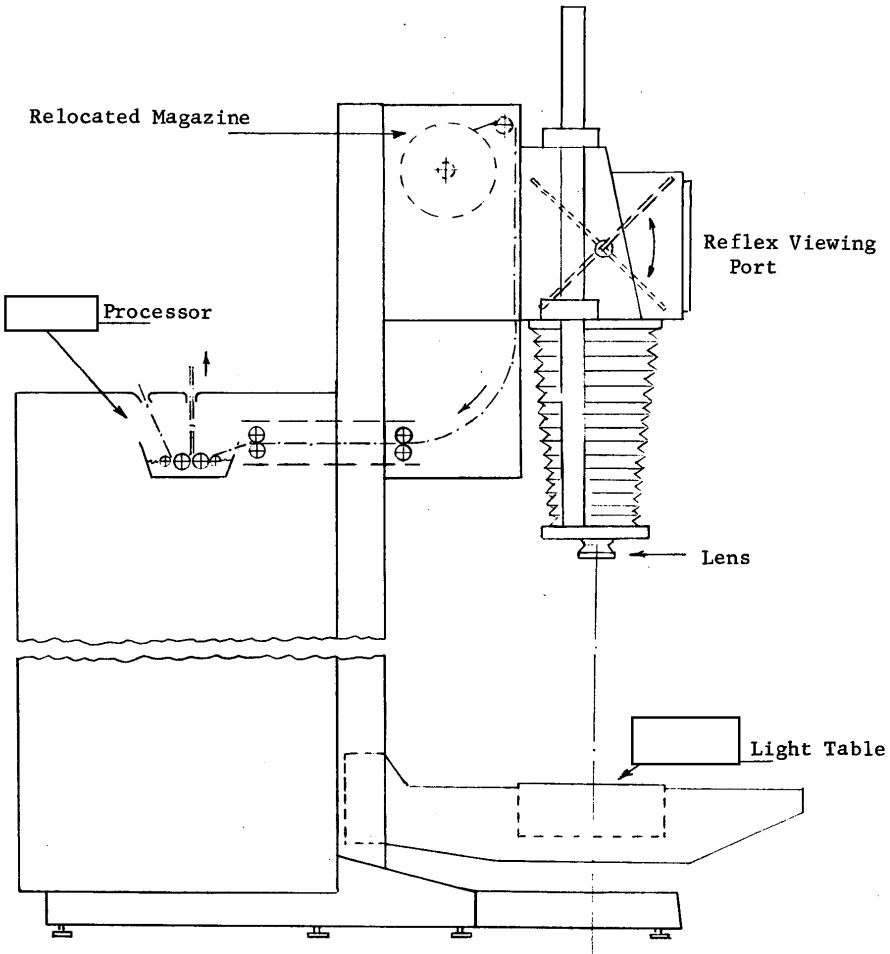
MAGNIFICATION RANGES REQUIRED RE-DESIGN OF OPTICAL HEAD, COPYBOARD ORIENTATION AND ELEVATOR MECHANISM AND RE-ORIENTATION OF MAGAZINE AND FILM PATH.

REFLEX VIEWING PORT OPERATIONALLY IMPRACTICAL USING HORIZONTAL OPTICS OF STANDARD PLATEMASTER.

REVISED VIEWGRAPH GENERATOR

1. VERTICAL OPTICAL SYSTEM (ONE LENS ONLY FOR ALL MAGNIFICATIONS)
2. FRONT LOADING MAGAZINE, NEW DESIGN TO LOCATE FORWARD OF MAIN FRAME
3. COPY BOARD & LIGHT TABLE ROTATED 90° ACCOMMODATING ALL COPY MATERIAL
4. RE-DESIGNED TRANSPORT & PROCESSOR
5. REFLEX VIEWING PORT
6. SEPARATE CONTROL CONSOLE

STAT




STAT

## REVISED VIEWGRAPH GENERATOR

ADVANTAGES

MEETS SPECIFICATIONS FOR MAGNIFICATION AND COPY MATERIAL SIZES AND FULL ROOM LIGHT OPERATION

HAS RESULTED IN A MORE EFFICIENT PIECE OF EQUIPMENT

SIMPLIFIED OPERATION

1 LENS FOR ALL MAGNIFICATIONS

FORWARD REFLEX VIEWING

EASE OF MAGAZINE LOADING

EASE AND CENTRALIZED CONTROL SYSTEM

RELIABILITY

NEW PROCESSOR AND TRANSPORT SYSTEM

INTEGRATED DESIGN

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EFFICIENCY OF AUTOMATIC VIEWGRAPH GENERATOR

VS

CONVENTIONAL PROCESSES

CONVENTIONAL PROCESS:


6.9 MIN/ VIEWGRAPH

SET UP 3-5 MIN/ COPY

ALL REDUCTIONS OR ENLARGEMENTS

NEGATIVE 9-1/2 MIN.

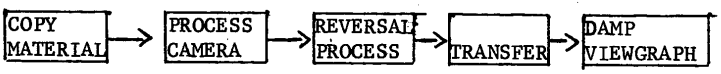
POSITIVE 9-1/2 MIN

5 MIN. + 19 MIN = 24 MIN/VIEWGRAPH
10 VIEWGRAPHS
5 MIN X 10 = 50 + 19 = 69 MIN.

PROCESS DATA

SKILLED OPERATOR (PHOTOGRAPHER)
PHOTO DARK ROOM REQUIRED
OPEN TRAY WET PROCESS
LINE COPY
CONTINUOUS TONE WITH FILM & CHEMISTRY CHANGE

HIGH SPEED CONVENTIONAL PROCESS:




4.5 MIN./ VIEWGRAPH

SET UP

20% REDUCTION
2X ENLARGEMENT

3-5 MIN. + 1/2 MIN. + 1 MIN. = 4-1/2 MIN./VIEWGRAPH
10 VIEWGRAPHS
3 MIN. x 10 = 30 +
(1-1/2 x 10) = 45 MIN.

SEMI-SKILLED OPERATOR
PHOTO DARK ROOM REQUIRED
OPEN TRAY WET PROCESS
LINE COPY ONLY

AUTOMATIC VIEWGRAPH GENERATOR:


62 SEC./ VIEWGRAPH

SET UP

4:1 REDUCTION
1:4 ENLARGEMENT

1/2 MIN. + 12 SEC. + 20 SEC. = 62 SECONDS/ VIEWGRAPH
CONTINUOUS

OFFICE COPIER CONCEPT
ANY OPERATOR
NO DARK ROOM - ROOM LIGHT OPERATION
CONTINUOUS TONE & LINE COPY

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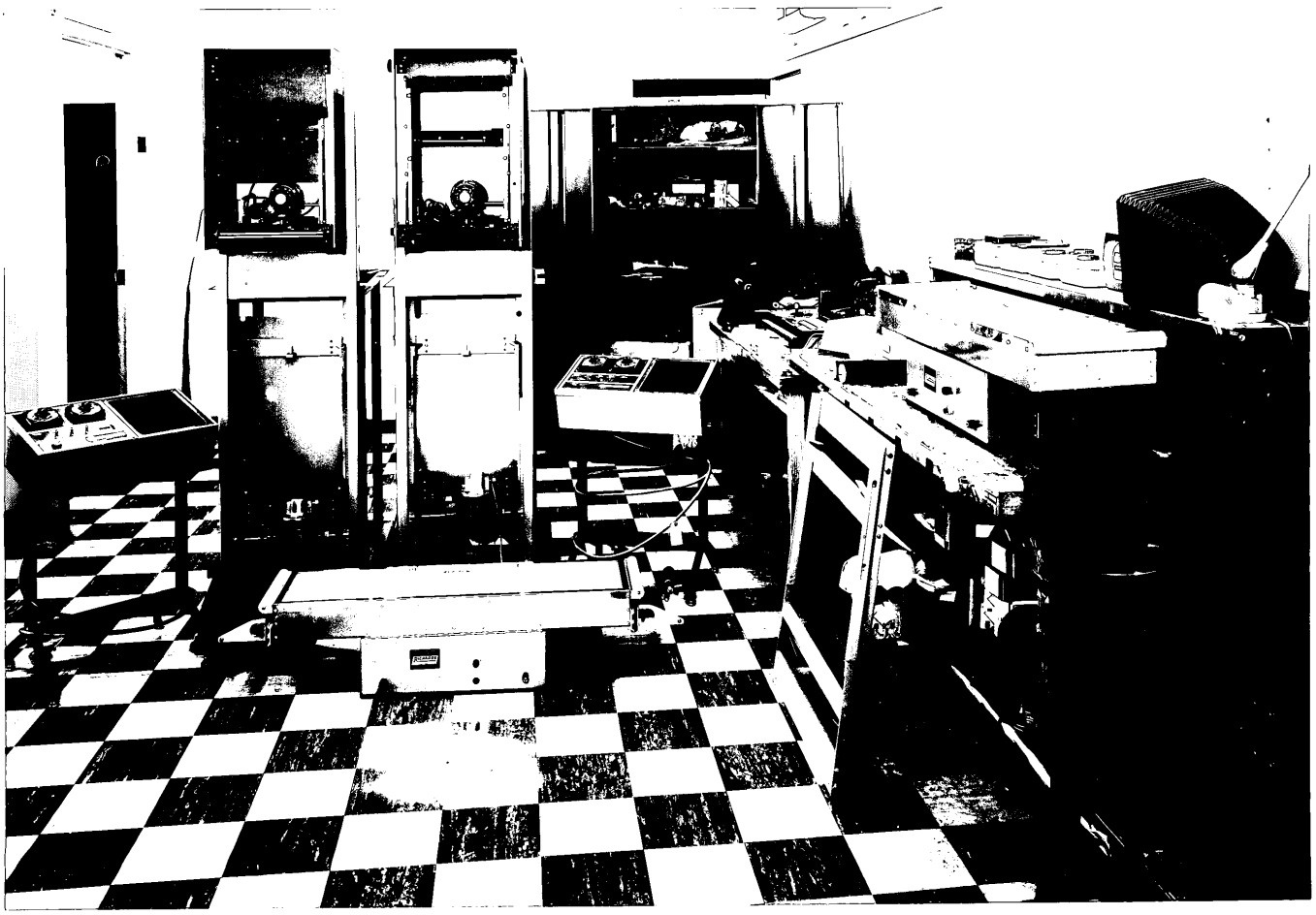
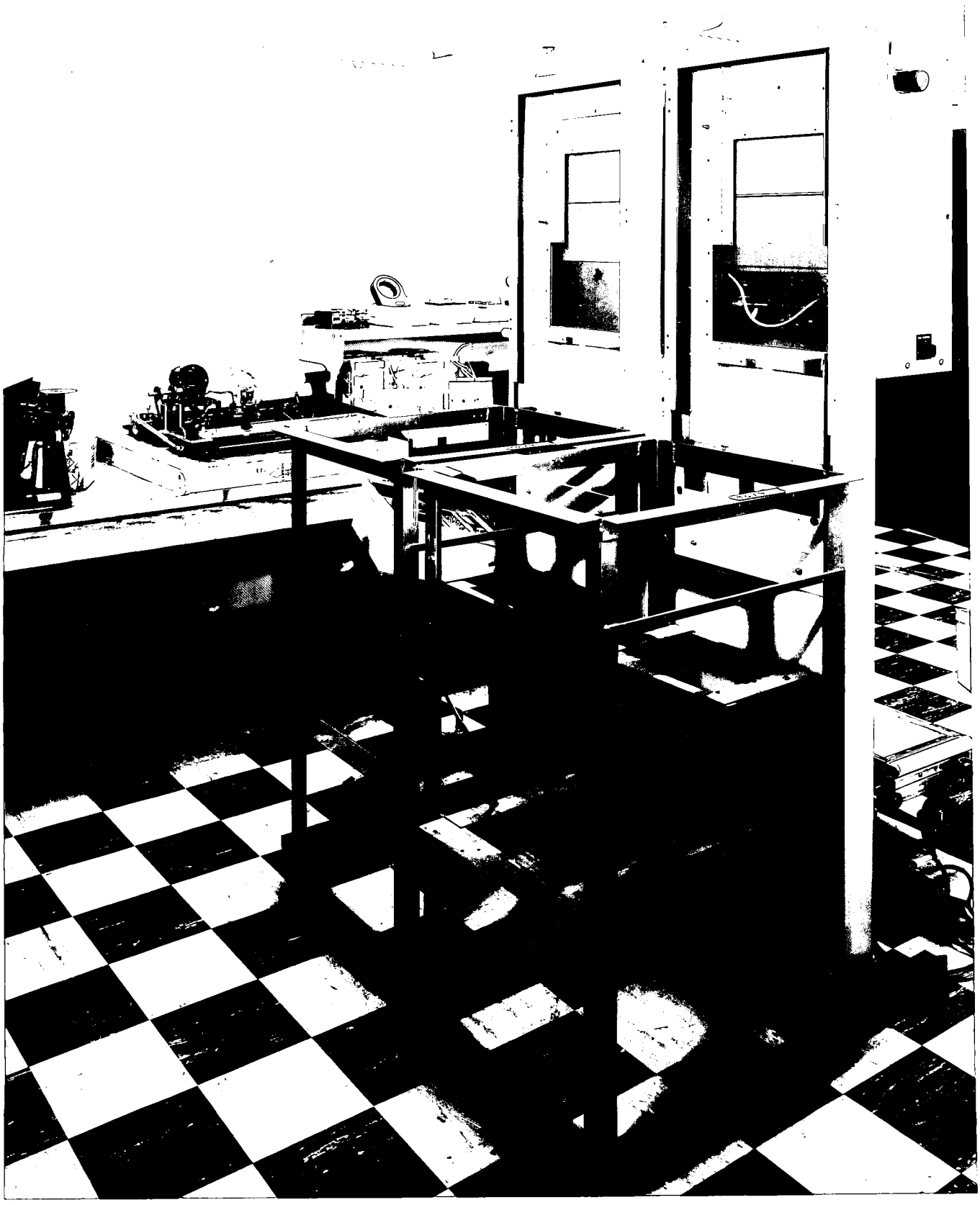
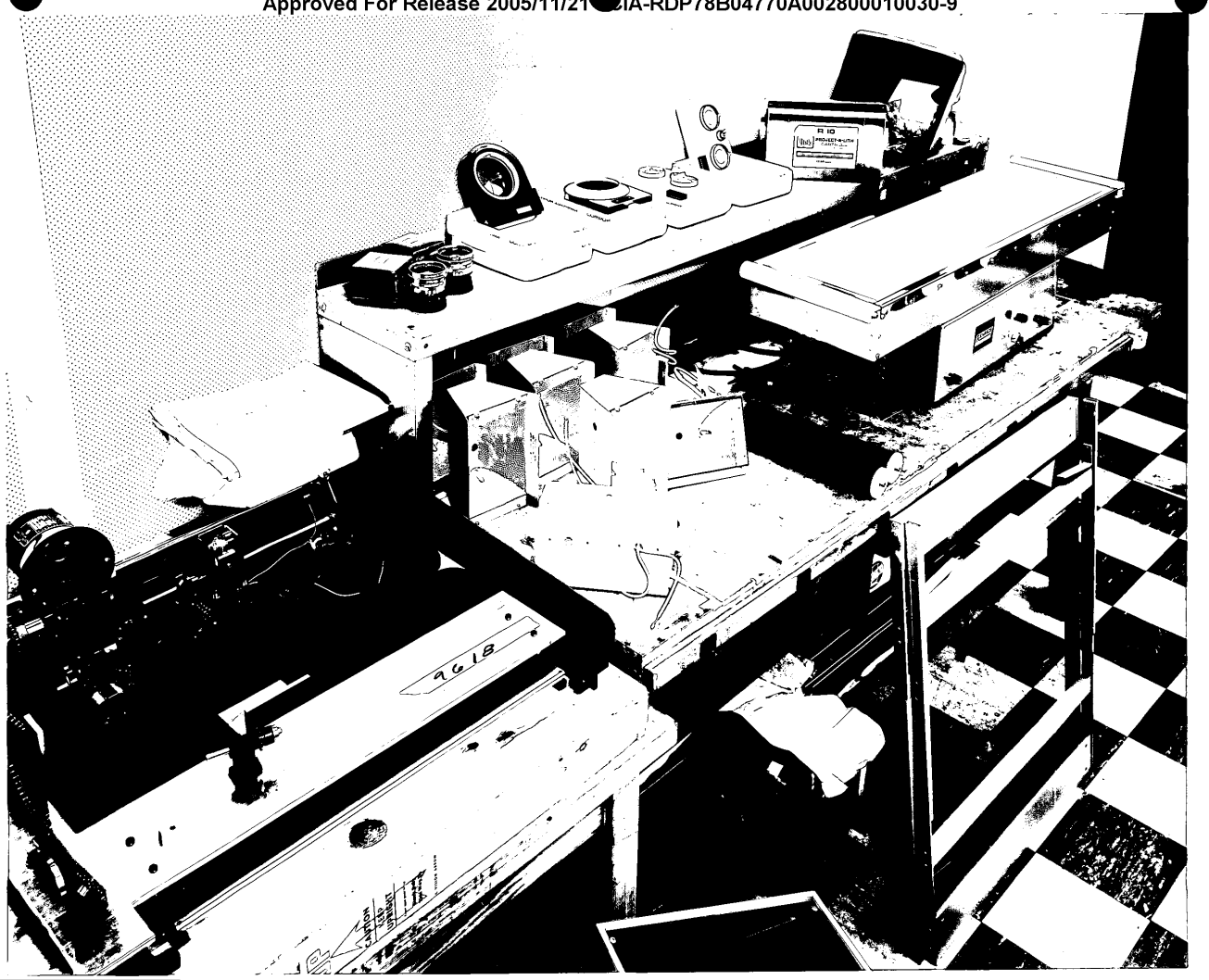




TAT

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